

REMARKS

Section numbers utilized herein correspond to like Section numbers in the Office action.

BOARD DECISION ON COPENDING S/N 09/307,544

Before addressing the substantive issues in this application, attention is directed to the Appeal of S/N 09/307,544 (application was cited in the Supplemental IDS filed 4/23/98), with claims directed to a "well plug additive" comprising "a dry mixture of water soluble crosslinking polymer, a crosslinking agent, and a reinforcing material" and a method of forming a well plug fluid (comprising the noted well plug additive).

Please notice, that on substantially this same "dry mixture" issue as in this application, the Board reversed rejections under 35 U.S.C. 103 over U.S. Patent No. 4,989,673 (Sydansk) in view of U.S. 4,566,979 (Githens); under 35 U.S.C. 103 over U.S. Patent No. 5,377,760 (Merrill) in view of U.S. 4,566,979 (Githens); and under 35 U.S.C. 103 over U.S. Patent No. 5,004,553 (House) in view of U.S. Patent No. 3,208,524 (Horner) and U.S. 4,566,979 (Githens).

EVOLUTION OF THE ART

Prior to addressing the substantive rejections, applicant wishes to summarize the evolution of the art, and briefly note the importance of applicant's invention:

- (1) Early art taught sequential injection of a solution of the polymeric gel components;
- (2) with an improvement being formation of a single aqueous gelation solution at the surface;
- (3) with a further improvement being surface formation of a gelation solution to which the fibers are then added; and
- (4) as applicant's further evolution, the claimed invention is directed to a dry mix of the polymeric gel components and fibers.

Notice that (1), (2) and (3) all involve solutions rather than applicant's dry mix

REJECTION UNDER 35 USC 103

4. Claims 1-13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Merrill (USP 5377760) in view of Messenger (USP 4579668) or Parsons (USP 2119829) further in view of Clampitt et al. (USP 3845822). The rejection is respectfully traversed.

This current Office action at 2 states, "applicant argues that all the above references teach addition of reinforcing materials in fluids while instant claims require them to be mixed dry. This difference has already been pointed out by the examiner in the office action. The examiner has also provided a motivation to use a dry mixture (please see page 4, paper no. 4, paragraph) 2 in gel of Merrill."

The "motivation" from the 5/2/00 Office action (Paper No. 4) referred to in the current Office action (Paper No. 12) is as follows, "[i]t would also be obvious to prepare a dry mixture of the ingredients that make up the gel of Merrill in order to reduce the cost of the gel and also to reduce the weight of gel to be carried to the site where drilling is to be performed" (Paper No. 4, at page 4, paragraph 2).

"Motivation" lacking, as it is already known to have polymer, the crosslinking agent, and reinforcing agent available at the drill site in dry form

Very respectfully, applicant states that this "motivation" is without merit. The drilling industry long ago recognized the folly in paying to transport water weight to the well site-- it is already very well known in the prior art to make the polymer, the crosslinking agent, and reinforcing agent available at the drill site in dry form. In fact, in some instances, not even water is shipped to the well site, as the prior art teaches using water from the formation, or water available at the drill site (i.e., sea water) as the "aqueous" component in the gel (*see*, U.S. Patent No. 5,415,229 at col. 7, lines 4-6).

It is admitted by applicant that it is known to have each of the three components (i.e., polymer, crosslinking agent and reinforcing agent) at the well site in dry form (separately). It is also admitted by applicant that it is known to have a dry mixture of the polymer and crosslinking agent (*see*, U.S. Patent No. 5,415,229, at col. 7, lines 49-53). However,

applicant respectfully submits that it is not known or suggested in the art to have a dry mixture of all three components.

Prior art "teaches away" from a "dry mixture" of all three components

The prior art has long consistently taught (1) make a gel of the polymer and crosslinking agent; and (2) add the reinforcing agent to the gel. The prior art does not teach or suggest a dry mixture of polymer, crosslinking agent and reinforcing agent, to which is then added water.

Cited Prior art "teaches away" from a "dry mixture" of all three components

Merrill

Merrill teaches the formation of a gelation solution to which the fibers are then added (i.e. fibers are added to "wet" polymer):

See, abstract, "fibers are added to a gelation solution;"

See, col. 2, at 42-43, "introducing reinforcing fibers into the gelation solution;"

See, col. 2, at 52-53, "quantity of fibers introduced to the gelation solution;"

See, col. 3, at 10-12, "the invention contemplates the incorporation of fibers in a gel by mixing the fibers with the gelation solution at the surface;"

See, col. 7, at 7-9, "results further confirm the increased strength produced by adding reinforcing fibers to the gelation solution prior to injection;"

See, col. 7, at 15-18, "mixing the fibers with the gelation solution and injection the resulting mixture;"

See, col. 7, lines 4-48, "fibers are simple to introduce into the gelation solution;" and

See, claim 1, which requires first "providing a gelation solution" and then "introducing reinforcing fibers . . . into the gelation solution."

Messenger

It is respectfully noted by applicant that Messenger teaches that "the loss circulation agents...may be added to the drilling mud as it is circulated through the well in the course of normal drilling operations, or they may be added in a discreet slug which is spotted at the loss circulation zone" (emphasis added) (col. 4, lines 45-52).

Parsons

It is also respectfully noted by applicant that Parsons also teaches "the addition of certain materials in a particular form to the circulating fluid (emphasis added) (page 2, col. 2, lines 19-21).

Clampitt

The applicant respectfully notes that Clampitt teaches the addition of finely divided solid material "into the polymer solution prior to the addition of the reducing agent and oxidizing agent" (col. 13, lines 51-53), or as an alternative, "the finely divided material can be added...as the base solution containing the cellulose ether and other components are being pumped through said conduit. It will usually be preferred to add the finely divided solid material last (col. 13, lines 56-61).

PRIOR ART OF RECORD

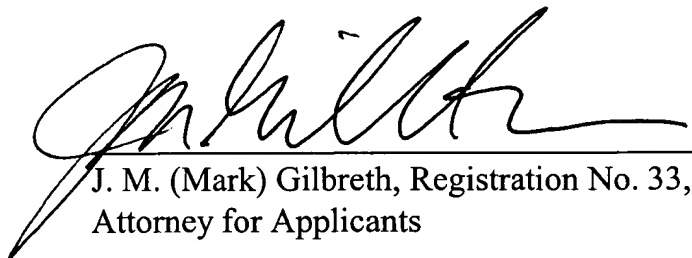
This application is a continuation of U.S. Patent Application S/N 09/307,545 (in which a 2nd Supplemental IDS was filed 10/8/99), which application is a divisional of U.S. Patent Application S/N 08/962,213, now issued as U.S. Patent No. 6,016,869 (in which an IDS was filed 3/31/98, and a Supplemental IDS was filed 4/23/98).

In accordance with MPEP § 2001.06(b), applicant respectfully requests that the prior art cited in those two related earlier applications be reviewed and made of record in this application.

If it would be of assistance in resolving any issues in this application, the Examiner is kindly invited to contact applicants' attorney Mark Gilbreth at (713) 667-1200, or, in his absence, Dr. Mary Gilbreth, Agent.

Respectfully submitted,

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J. M. (Mark) Gilbreth, Registration No. 33,388
Attorney for Applicants

Gilbreth & Associates, P.C.
P.O. Box 2428
Bellaire, TX 77402-2428
T (713) 667-1200
F (713) 667-4424